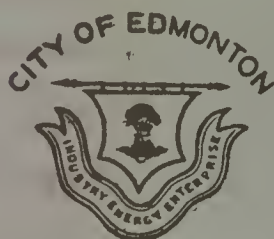


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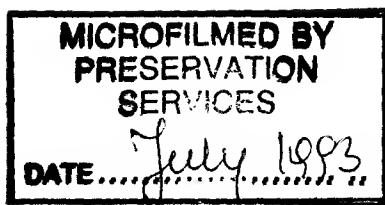
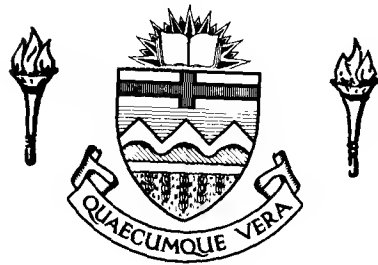
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**CITY OF
EDMONTON
ALBERTA**



**HEALTH
DEPARTMENT
REPORT
1920**

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**CITY OF
EDMONTON
ALBERTA**



**HEALTH
DEPARTMENT
REPORT
1920**

STAFF 1920

Medical Officer of Health.....T. H. Whitelaw, B.A., M.B.
Chief Health Inspector.....A. S. Main.
Health InspectorR. T. Anderson.
Chief Sanitary InspectorW. R. Graham.
Sanitary Inspector.....J. M. Highet, R.P.C., A.I.S.E.
Chief Food Inspector.....L. H. Swail, V.S.
Food Inspector.....T. E. Lord.
Milk Inspector and ChemistH. C. Graham, B.A.
Dairy InspectorC. Ellinger.
AccountantMiss B. B. Murray.

May 11th, 1921.

MESSRS. THE COMMISSIONERS,
City.

Gentlemen:

The following report for the year ending December 31st, 1920, is respectfully submitted.

During the last year there has been an unusual prevalence of the more serious infections, Smallpox, Scarlet Fever, and Diphtheria, and of one or the minor infections, Mumps particularly, in the last three months.

Cases admitted to the Isolation Hospital numbered 742, or almost exactly double the number admitted during 1919 when admissions numbered 370.

The patients admitted, by months, were:

January	60
February	47
March	66
April	55
May	51
June	42
July	48
August	37
September	55
October	79
November	123
December	79

Total 742

The largest total ever admitted for one month was 123 in November, when a coincidence of epidemic conditions of Scarlet Fever, Diphtheria and Smallpox occurred.

Patients admitted, classified as to the disease, during the year:

Scarlet Fever	385
Diphtheria	178
Smallpox	122
Measles	22
Erysipelas	13
Tuberculosis	16
Cerebro Spinal Meningitis	1
Impetigo Contagiosa	1
Chickenpox	2
Venereal Disease	2

Total 742

One patient included under Scarlet Fever, admitted in December, was also affected with Diphtheria at the same time.

The deaths numbered 33, or 4.4 per cent. of the 742 cases from the following causes:

Scarlet Fever	7	rate per cent 2.
Diphtheria	11	rate per cent 6.2
Tuberculosis	8	rate per cent 50.
Measles	2	rate per cent 9.
Senility	2	rate per cent
Smallpox	2	rate per cent 1.6
Cerebro Spinal Meningitis ..	1	rate per cent

The death rate for Scarlet Fever, 2% of the patients admitted, is comparatively speaking very low. For Diphtheria the rate of 6.2% is higher than it should be, and is indicative of the fact that medical treatment and especially the use of antitoxin early in the disease was not obtained. Nevertheless the rate per cent is only about one-fourth that of pre-antitoxin days. That two deaths out of the small number of 22 Measles patients occurred, or 9%, clearly indicates how serious a disease Measles is, and that it should not be regarded lightly. Of the

Tubercular patients, 50% died, which high rate is due to the advanced and hopeless condition of most of the cases admitted.

While many of the 122 Smallpox patients admitted were of a very serious type, 90% of them being unvaccinated previously, it is fortunate that only two deaths occurred, one an infant born in the hospital with the disease, the mother being previously infected, and an adult who had the disease in a malignant form, dying on the fourth day.

During the year great improvements, including sanitary conveniences, were made to the Smallpox quarters, which now has two wards of a maximum of ten beds each, with additional accommodation for nurse and orderly.

The accommodation for Scarlet Fever cases, which had in past years been quite adequate, was found during the year at times to be quite insufficient, resulting in overcrowding of patients. As a result the wards formerly used for Measles and other minor conditions were also used for Scarlet Fever exclusively, but even with this additional accommodation the number of Scarlet Fever cases applying for admission was so much above normal that overcrowding of the wards at times occurred. The greatest defect was, however, found to be due to the lack of sufficient numbers of small wards in which doubtful cases, or cases of double infection, could be isolated. These small wards must be provided as an addition if the Hospital is to be conducted with danger of cross infection reduced to a minimum.

Communicable diseases reported during the year:

	City Cases	Outside Cases	Total
Smallpox	196	17	213
Diphtheria	330	7	337
Scarlet Fever	559	24	623
Scarlet Fever and Diphtheria	2	0	2
Cerebro Spinal Meningitis	0	1	1
Chickenpox	340	1	341
Measles	996	2	998
German Measles	6	1	7
Mumps	441	1	442
Whooping Cough	429	0	429
Erysipelas	14	4	18
Tuberculosis	18	10	28
Encephalitis Lethargica ..	3	0	3
Typhoid Fever	17	4	21
Totals	3,391	72	3,463

Communicable diseases reported by months:

January	396
February	410
March	387
April	255
May	269
June	203
July	154
August	85
September	130
October	240
November	473
December	461
Total	3,463

It is to be noted that August shows the lowest incidence of disease, followed by a gradual increase beginning in September when the schools were re-opened.

Total cases of disease reported—

For 1920	3,463
For 1919	3,237 (Incl. Influenza.)
For 1919	1,391 (Excl. Influenza.)
For 1918	8,076 (Incl. Influenza.)
For 1918	2,340 (Excl. Influenza.)

As it was decided that Influenza quarantine was of no practical utility, no Influenza reports were taken during 1920, and therefore it is evident the increase in infectious diseases other than Influenza during 1920 is quite marked.

Tuberculosis

There were reported 28 cases only. These were probably only the advanced cases in which there could be no doubt as to diagnosis. That there were 20 deaths recorded from Tuberculosis indicates there must be a large number of unreported cases. The Provincial Sanitarium at Bowness is now receiving patients but apparently hopeless and incurable cases are not admitted there.

Smallpox

There was, during the year, except for the month of August, a continuation of sporadic cases of which a considerable number came in from the country, in which the disease was quite prevalent generally. There were 213 cases during the year of which at least nine-tenths were unvaccinated. Of those vaccinated practically all were over 30 years of age. Owing to outbreaks in different schools, most of the unvaccinated children have been vaccinated during the year in the schools affected. Approximately 600 were vaccinated at the Health Office.

Typhoid Fever

Of Typhoid Fever, 22 cases occurred, of which 4 contracted the disease outside the city. Of the remaining 18 cases, 5 used well water. Fifteen of the 18 either had poor sanitary conditions about their premises or were without sanitary conveniences. In eight cases the factor of exposure to a previous case of typhoid appears to have been the source of infection. The number of deaths due to Typhoid Fever was two, but in addition 3 other deaths from Typhoid Fever occurred, all of which were from the country districts and died at our hospitals.

Scarlet Fever

During the year Scarlet Fever has shown a tendency to increase. The number of cases reported was 623, as compared with 328 for 1919, 98 for 1918, and 96 for 1917. The number of deaths resulting from it was 10, giving a death rate of 1.6% of the cases reported. In 1919 the rate was almost double, being slightly less than 3%. This indicates clearly the mildness of the epidemic and to a large extent explains the difficulty in controlling its spread. A severe case is much less dangerous to the community than a mild one, as the severe cases are brought under medical care and are quarantined early in the attack. Many of the milder cases are not recognized or are ignored by the parents or guardians. No physician is called in, and after two or three days, when symptoms and rash, if any, have disappeared, no definite diagnosis can be made. Many cases have only been discovered or suspected when desquamation of the skin or peeling appears two or three weeks later. In the meantime such cases not being under any medical supervision or quarantine, are liable to communicate the disease to all susceptible persons with whom they come into contact. A special feature of this Scarlet Fever epidemic is its apparent tendency to attack adults, some of whom reported they had had the disease earlier in life. There appears to have been a much larger proportion of adults attacked than was usual in past years.

Diphtheria

The cases reported numbered 337, a decided increase over 1919 when 80 cases were reported. The fatalities were, however, only 17, giving a death rate of 5%, as compared with 9% in 1919 when 7 deaths occurred from the 80 cases reported. Many of these 17 deaths might have been avoided if treatment had been instituted earlier in the attack and anti-toxin used.

In addition to the 17 deaths of citizens, 4 deaths occurred of outside cases.

Measles

This disease was prevalent for the first six months of the year, but was very slightly in evidence for the last half of the year. There

were reported 998 cases during the year, with 3 deaths, giving a death rate of one-third of one per cent.

Whooping Cough

There were reported 449 cases with 27 deaths or the same number of deaths caused by Scarlet Fever and Diphtheria combined. This indicates how much more serious the disease is than is commonly estimated.

The death rate is 6% of the number of cases reported, though probably the actual number of cases was much greater.

Erysipelas

The number of cases was 14 city and 4 from outside the city, or 18 in all. The number of deaths due to the disease was 4, 3 of which were under one year of age, indicating how fatal it is in the case of infants.

Influenza

While Influenza showed a great diminution during the year as compared with the two previous years, the number of deaths ascribed to it or to its results was fairly high, or 55. The great majority of these deaths occurred in the months of March, April, and May, after which it practically no longer existed except in a few rare and doubtful cases.

Death rate for the more important diseases:

Year	Cases	Rate per 100,000		Per Cent of Cases
		Deaths	Pop.	
Typhoid Fever—				
1917..	14	3	6	
1918..	14	3	5	
1919..	23	3	5.5	
1920..	18	2	3	
Scarlet Fever—				
1917..	99	0	0	
1918..	98	0	0	
1919..	328	9	15	2.74
1920..	623	10	15.4	1.6
Diphtheria—				
1917..	29	2	4	7.
1918..	40	7	11.6	17.5
1919..	80	7	11.6	8.7
1920..	337	17	26	5.
Measles—				
1917..	337	6	12	1.8
1918..	745	5	8.3	.7
1919..	373	2	3.33	.53
1920..	998	3	4.6	.53
Whooping Cough—				
1917..	285	6	12	2.1
1918..	281	12	20	4.3
1919..	146	1	1.66	.7
1920..	449	27	41.5	6.
Tuberculosis of the Lungs (not all reported)—				
	City Outside			
Year	Cases	Cases	Total	Deaths
1917..	16	33	49	62
1918..	16	17	33	33
1919..	16	21	37	37
1920..	18	10	28	20

There is considerable decrease in the number of deaths recorded from Tuberculosis as compared with the previous three years. Fewer cases appear to have come in to the city for treatment during 1920 than in previous years. This is possibly due to the opening of the Provincial Sanitarium at Bowness.

Vital Statistics

Year	Pop.	Deaths Ex. Rate	
		Outside Cases	per 1000 Pop.
1917.. . . .	52,000	412	8
1918.. . . .	60,000	890	15 (Incl. Influenza.)
1918.. . . .	60,000	521	8.7 (Excl. Influenza)
1919.. . . .	60,000	614	10.2 (Incl. Influenza.)
1919.. . . .	60,000	485	8.08 (Excl. Influenza)
1920.. . . .	65,000	661	10.17 (Incl. Influenza.)
1920.. . . .	65,000	614	9.4 (Excl. Influenza)

Births

Year	Pop.	Rate per 1000	
		Births	Pop.
1917.....	52,000	1,680	32.3
1918.....	60,000	1,847	31.
1919.....	60,000	1,773	29.5
1920.....	65,000	2,339	36

The birth rate for 1920 shows a considerable rise over that for the three preceding years. The births include 18 twin births and 97 illegitimate births. The male births were 1,226, exceeding female births, which were 1,113, by 113.

Marriages

1917	785
1918	737
1919	1,006
1920	1,162

A steady increase in the number of marriages has taken place since the end of the war in 1918.

Infant Mortality

Year	Deaths under 1 yr.		Per Cent.	Rate per 1000 Births	
	Deaths	Total Deaths		Births	Births
1917	136	412	33	1,680	81
1918	193	890	21.7	1,858	100.4
1918* ...	163	521	31.3	1,858	88
1919	189	823	23	1,773	106
1919* ...	167	654	25.5	1,773	94
1920	227	661	34.2	2,338	97
1920* ...	219	606	36	2,339	93.2

*Note—Excluding Influenza.

The Influenza Epidemic which so materially raised the infantile death rate during 1918 and 1919 had a less noticeable effect in the last year, but the heavy death rate from Pneumonia during the early months of the year was no doubt contributed to by Influenza as the primary condition.

The number of infants who died in hospitals or nursing homes was 93 or more than one-third of the total. As the infants kept in nursing homes are necessarily bottle-fed babies, it is reasonable to expect that the death rate among them would be higher than the average, but nevertheless, the deaths among these infants, making allowance for unavoidable conditions, seems unreasonably high. Among the illegitimates the death rate is 400 per 1,000, or 4 times the average death rate among infants. This is apparent from the fact that 97 illegitimates were born during the year and at least 38 of these unfortunates died. This high rate of mortality among the illegitimate births raises our general death rate materially. Leaving out of consideration the illegitimate class, the rate would be 84 per 1,000 births.

Causes of death of 227 children under one year of age:

Premature	38
Inanition or Malnutrition	34
Pneumonia and Broncho-Pneumonia	33

Gastro Enteritis	26
Whooping Cough	16
Congenital Conditions	12
Accident of birth	9
Influenza	8
Malformation	7
Meningitis	5
Convulsions	4
Indigestion	3
Erysipelas	3
Scarlet Fever	3
Various	3
Bronchitis	2
Epilepsy	2
Measles	2
Syphilis	2
Haemorrhage	2
Myocarditis	2
Smallpox	1
Nephritis	1
Septicaemia	1
Intusception	1
Nasopharyngeal growth	1
Jaundice	1
Hypertrophic pyloric stenosis	1
Asthenia	1
General Debility	1
Accidental Suffocation	1
Tubercular Meningitis	1

Total 227

To reduce infantile mortality in our city, it is apparent that some special effort should be made to attack the conditions under which so large a number of infants die from, 1st, Prematurity; 2nd, Penumonia; Broncho-Pneumonia, and Bronchitis; and 3rd, disorders of the intestinal tract. The deaths due to these three conditions are 38, 35 and 63 respectively, or 136 out of a total of 227, or 60%. Many of these deaths are preventable by education of prospective mothers and post-natal advice as to the feeding and rearing of infants, and to this end the most efficient work can be done by the employment of nurses specially trained for this class of work. The establishment of clinics which are doing splendid work in the treatment of infants, is a step in the right direction, and the linking up of this work with the Health Department by the employment of a special visiting nurse, who would work in conjunction with it, would be of great benefit to the community.

Nationality of Our Citizens

Notwithstanding the cosmopolitan character of our population, which includes 25 nationalities outside of those from the British Empire and the United States, it would appear from the following figures that 72% are of British parentage and 83%, including the United States, from English-speaking parentage

The nativity of male parent of 2,313 children born:

Canadian	773	33.4 %
British Empire (outside Canada) ..	887	38.4 %
United States of America	277	11.9 %
Non-English-speaking countries...	376	16.3 %
Total	2,313	100 %

Summary of Statistics

Area of city (including 1,000 ac. water)	27,520 acres
Population, estimated	65,000
Persons per acre of land	2.36
Natural increase (excess of births over deaths)	1,659
Rate of increase per 1,000 population..	25.5
Still births	97

Births (excluding still births)	2,339
Birth rate per 1,000 population	36
Deaths (excluding still births)	661
Death rate per 1,000 of population	10.
Deaths of infants under 1 year of age ..	227
Infant death rate per 1,000 births	97
Marriages	1,139
Rate per 1,000 of population	17.5

The excessive area of our city in proportion to population may be better appreciated by the following comparative figures for 1919 from the Dominion Statistician which indicate that in area Edmonton holds a unique position among the cities of Canada, being exceeded by Montreal only.

City	Population	Density of	
		Area	Population
		Acres	Per Acre
Montreal	706,600	32,155	22.
Edmonton	66,000	27,200	2.4
Calgary	75,000	25,920	2.9
Toronto	499,278	20,480	24.3
Winnipeg	200,000	14,865	13.4
Vancouver	123,050	10,547	11.6
Regina	40,000	8,427	4.7
Saskatoon	28,000	8,000	3.5
Hamilton	108,143	7,910	13.6

Scavenging

The scavenging and garbage collection has been carried on under the control and supervision of the Streets and Scavenging Superintendent during the year. The appropriation for this work, considering the inordinate area within the city limits and the long hauls necessary, has not been sufficient to give satisfactory service. The establishment of dumps in various parts of the city has resulted in many complaints being made by residents, though these dumps have been located where a fill-in was advisable or necessary. A new Incinerator for the destruction of refuse is urgently needed, and it should be located, when built, as centrally as possible, so as to serve all parts of the city without involving too long a haul. At the Power House is the location I would strongly advise as being the most suitable and economical and least liable to cause criticism.

City Water Supply

Weekly reports made to the Health Department, showing the bacterial count, have demonstrated that at all times a safe public water supply was being pumped, and that the filtration system and chlorination was proving quite effective in reducing bacterial impurity to a minimum. Some complaints of disagreeable taste from the chlorine were received from citizens who obtain their water from the dead end of water pipes, for which the only remedy appears to be to flush out these dead ends at frequent intervals. No possibility of Typhoid Fever exists from drinking city water under the present method of treatment.

Yard hydrants were installed during the year in some cases where sewer service was also available but the prohibitive cost of plumbing made it impossible to enforce the sewer and water by-law in these cases, owing to the financial inability of the parties concerned to undertake the work at their own expense. The by-law of the city which contemplated doing such work and charging it up as a local improvement tax was not put in operation by the city during the year, and until it is little can be done to improve matters in this respect. Many houses, moreover, are of so flimsy construction as to make the installation of plumbing impossible, without the certainty of a freeze-up in the winter months.

Applications for City Departments

There were examined as to physical fitness the following applicants:

For the Fire Department	11
For the Street Railway Department	9
For the Police Department	33
Total	53

Medical Relief

A large number of minor ailments and conditions have been treated or prescribed for at the Health Department. In co-operation with the Board of Public Welfare, a number of cases of relief have been treated and visited in the city limits.

Milk and Dairy Inspection

During the year licenses for the sale of milk were applied for to the number of 471.

Licenses applied for	471
Licenses approved	438
Licenses refused	18
Licenses held in abeyance	15
Number of inspections made	1119

The tuberculin test has not yet been made compulsory. During the year three dairy herds numbering 86 head were tuberculin tested, one herd of 24 being tested twice. From these tuberculin tested cows a special quality milk for babies has been put on the market.

Special attention has been necessary to secure the proper disinfection and cleaning of milking machines, a number of which are now in regular use.

The milk as received at the large collecting stations of the Edmonton City Dairy was regularly inspected several times a week and microscopical tests of samples were made as a means of checking up the quality of the milk supplied. When the bacterial count exceeded that considered normal, an investigation of the methods followed by the producer was made to find the source of contamination, with excellent results in most cases.

The milk supply of the city is derived from a widely extended area of country included in the city limits and the vicinity of Leduc, Millet, Wetaskiwin, Morinville, Fort Saskatchewan, Stony Plain, and Tofield. To inspect for license all farms within this large area entails a great amount of work during the year on the part of the Dairy Inspector detailed for this duty. Unless the conditions in regard to stables, milk house, utensils, etc., come up to the standard set by the by-law reasonably well, the license is not granted but is withheld pending improvements necessary.

Samples are taken as frequently as possible from delivery wagons, and examined as to the butter-fat content. The sediment test applied to these samples in a very graphic way shows the amount of gross dirt in a pint of milk and is a check on the methods followed by the producer and retailer.

The bulk of the milk consumed in the city is pasteurized, but owing to the number of private cows kept, as well as small dairies, it is difficult to correctly state the proportion of pasteurized milk sold. In the absence of tuberculin testing of all dairy cattle, pasteurization offers the only absolute security against danger of contracting tuberculosis from the use of milk, and also minimizes the danger of contracting other infections. Fortunately there is no evidence that we have had any milk-borne epidemics of Scarlet Fever or Typhoid Fever during the year.

The question of applying the tuberculin test to all dairy cows supplying milk to our city, through co-operation with the Dominion authorities, should be given attention, and a practical basis of working it out to the best advantage decided upon.

Food Inspection

Under the system followed, all meat products are inspected either by the Government Inspector or the Chief Food Inspector of the Health Department. Supervision is given and inspection carried out of premises

and food stuffs in Restaurants, Hotel Kitchens, Bakeries, Meat Markets, Groceries, Fruit and Confectionery Stores and City Markets.

During the year there were 5,282 inspections made, and licenses were granted only to premises where conditions of food production and sale were satisfactory.

There were condemned 29,981 lbs. of food stuffs, including all kinds of meat, fish, fowl, vegetables, butter, and canned goods.

Prosecutions

Five bakeries were prosecuted and convictions obtained for selling light-weight bread. Three other parties were convicted and fined for various infractions of the Food By-Law.

Sanitary Inspection

During the year, all complaints of insanitary conditions have been promptly dealt with by the Sanitary Inspectors. Our staff of inspectors has been, however, too much reduced to give as much personal supervision to the work of the Scavenging Department as appears to be necessary. A full report of the work done is herewith attached, from the Chief Sanitary Inspector, Mr. W. R. Graham.

In concluding this report, I desire to express my appreciation of the assistance given to the Department during a very arduous year, due to the unusual prevalence of Infectious Disease, by the Medical Department of the School Board, the Board of Public Welfare and the Medical Profession generally. I also desire to pay tribute to the Staff of the Department, who have given loyal and devoted attention to their duties throughout the year.

Yours respectfully,

T. H. WHITELOW,

Medical Officer of Health.

August 10th, 1921.

DR. T. H. WHITELOW,
Medical Officer of Health,
Edmonton, Alberta.

Dear Sir:

I beg to submit the following report of the Sanitary Work of the Department for the year ending December 31st, 1920:

Number of complaints received from the public	496
Number of complaints received, unfounded or rectified prior to inspection	42
Number of complaints referred to other departments	110
Number of complaints received from other departments	12
Number of complaints referred to Mullen & Carruthers	18
Verbal and written notices issued for the abatement of nuisances:—	
To instal plumbing	19
To repair plumbing	44
To clean plumbing	20
To turn water on plumbing	1
To provide slop sink	1
To abate nuisance from sewer gas	1
To abate nuisance from sewage	1
To relieve sewers	1
To ventilate lavatory	1
To provide heat in apartment blocks	5
To clean dwellings	9
Unsanitary buildings placarded	5
To remove unsanitary building	1
To abate nuisance from gasoline fumes	2
To clean corridors and stairways in apartment	

block	1
To remove manure	108
To provide manure bins	3
To clean yard and remove refuse	70
To remove refuse from lane	16
To cease throwing slops in lane	25
To remove dead animals	11
To provide ash and garbage receptacles	27
To remove animals from dwelling	1
To remove poultry from dwelling	2
To detach poultry house from dwelling	1
To remove hogs	3
To clean or remove poultry houses	5
To remove stagnant water	5
To cease picketing cattle as per By Law 9, Sec. 59	1
To apply for hog permits	8
To remove hides	1
To clean bedrooms and provide bedding	3
To leave privy accessible to scavengers	3
To remove privies	3
To repair or provide privies	34
To clean or fill up cellars	5
To cease burning refuse	7
To provide individual towels	1
No. of barber shops recommended for license ..	71
No. of barber shops refused license	2
No. of billiard halls, pool rooms and bowling alleys recommended for license	38
No. of billiard halls, etc. refused license	1
No. of dance halls recommended for license ...	1
No. of shacks and tents recommended for license	33
No. of yard hydrant permits granted	111
No. of hog permits granted	55

Six samples of water were forwarded to the Provincial Laboratory for analysis. The reports on five samples showed that the water was fit for domestic purposes.

During the year we prosecuted one party and got conviction.

Yours respectfully,

W. R. GRAHAM,

Chief Sanitary Inspector.

REVENUE AND EXPENDITURE ACCOUNTS FOR THE YEAR ENDING DECEMBER 31st, 1920

REVENUE

Inspection Fees	\$ 473.25
Cemetery, Sale of Graves, and Fees	1,566.25
Influenza Epidemic (collections)	3,306.00
	<hr/>
	\$ 5,345.50
Balance cost of operation for 1920	30,729.88
	<hr/>
	\$36,075.38

Expenditure

Salaries	\$20,084.63
Printing, Postage and Stationery	519.35
Transportation	2,211.40
Rent and Telephones	1,735.98
Uniforms	178.58
Disinfection and Quarantine	701.84
Cow and Dairy Inspection	94.77
Cemetery Expenses	2,774.54
Burial of Paupers	59.00
Influenza Expenses	7,437.93
Miscellaneous	277.36
	<hr/>
	\$36,075.38